

# PRODUCT DATA SHEET

## Sikadur<sup>®</sup>-32 Hi-Mod

HIGH-MODULUS, HIGH-STRENGTH, EPOXY BONDING/GROUTING ADHESIVE

### PRODUCT DESCRIPTION

Sikadur<sup>®</sup>-32 Hi-Mod is a multi-purpose, 2-component, 100 % solids, moisture-tolerant structural epoxy adhesive. It conforms to the current ASTM C-881 Types I, II, and V, Grade 2, Class C and AASHTO M-235 specifications.

### USES

Sikadur<sup>®</sup>-32 Hi-Mod may only be used by experienced professionals.

- Bond fresh, plastic concrete to hardened concrete and steel.
- Grout horizontal cracks in structural concrete and wood by gravity feed.
- Machinery and 'robotic' base-plate grout.
- Structural adhesive for concrete, masonry, metal, wood, etc

### CHARACTERISTICS / ADVANTAGES

- High-strength bonding/grouting adhesive.
- Tolerant to moisture before, during and after cure.
- Excellent adhesion to most structural materials.
- Convenient easy-to-mix ratio A:B = 1:1 by volume.
- Easy-to-use for bonding/grouting applications.
- Fast initial set; rapid gain to ultimate strengths.
- USDA-certified for use in food plants.

### PRODUCT INFORMATION

<b>Chemical Base</b>	100 % epoxy	
<b>Packaging</b>	1, 2 and 4 gal. units	
<b>Color</b>	Concrete gray	
<b>Shelf Life</b>	2 years in original, unopened containers	
<b>Storage Conditions</b>	Store dry at 40–95 °F (4–35 °C). Condition material to 65–75 °F (18–24 °C) before using.	
<b>Viscosity</b>	Approximately 4–5,000 cps.	
<b>Water Absorption</b>	0.21 % (7 days, 24 h immersion)	(ASTM D-570) 73 °F (23 °C) 50 % R.H.

## TECHNICAL INFORMATION

Compressive Strength	40 °F*	73 °F*	90 °F*	(ASTM D-695)
	(4 °C)	(23 °C)	(32 °C)	
8 hour	-	140 (1.0)	1,700 (11.7)	
16 hour	-	4,800 (33.1)	7,300 (50.3)	
1 day	30.0 (0.2)	5,700 (39.3)	7,300 (50.3)	
3 day	5,300 (36.6)	11,300 (77.9)	10,400(71.7)	
7 day	9,600 (66.2)	11,800 (81.4)	10,400(71.7)	
14 day	11,900 (82.1)	12,200 (84.1)	10,400(71.7)	
28 day	12,600 (86.9)	12,200 (84.1)	10,500(72.4)	

\*Material cured and tested at the temperatures indicated.

<b>Modulus of Elasticity in Compression</b>	2.1 x 10 <sup>6</sup> psi (1,449 MPa) (7 days)	(ASTM D-695) 73 °F (23 °C) 50 % R.H.														
<b>Flexural Strength</b>	7,000 psi (48.3 MPa) (14 day)	(ASTM D-790) 73 °F (23 °C) 50 % R.H.														
<b>Modulus of Elasticity in Flexure</b>	6.0 x 10 <sup>5</sup> psi (4,800 MPa) (14 day)	(ASTM D-790) 73 °F (23 °C) 50 % R.H.														
<b>Tensile Strength</b>	6,900 psi (48 MPa) (7 days)	(ASTM D-638) 73 °F (23 °C) 50 % R.H.														
<b>Tensile Modulus of Elasticity</b>	5.4 x 10 <sup>5</sup> psi (3,726 MPa) (14 days)	(ASTM D-638) 73 °F (23 °C) 50 % R.H.														
<b>Elongation at Break</b>	1.9 % (7 days)	(ASTM D-638) 73 °F (23 °C) 50 % R.H.														
<b>Tensile Adhesion Strength</b>	<table border="1"> <tbody> <tr> <td rowspan="3"><b>2 day (moist cure)</b></td> <td>Plastic Concrete to Hardened Concrete</td> <td>1,700 psi (11.7 MPa)</td> <td rowspan="6">(ASTM C-882) 73 °F (23 °C) 50 % R.H.</td> </tr> <tr> <td>Hardened Concrete to Hardened Concrete</td> <td>2,000 psi (13.8 MPa)</td> </tr> <tr> <td>Hardened Concrete to Steel</td> <td>1,900 psi (13.1 MPa)</td> </tr> <tr> <td rowspan="3"><b>14 day (moist cure)</b></td> <td>Plastic Concrete to Hardened Concrete</td> <td>2,200 psi (15.1 MPa)</td> </tr> <tr> <td>Hardened Concrete to Hardened Concrete</td> <td>2,000 psi (13.8 MPa)</td> </tr> <tr> <td>Hardened Concrete to Steel</td> <td>2,000 psi (13.8 MPa)</td> </tr> </tbody> </table>	<b>2 day (moist cure)</b>	Plastic Concrete to Hardened Concrete	1,700 psi (11.7 MPa)	(ASTM C-882) 73 °F (23 °C) 50 % R.H.	Hardened Concrete to Hardened Concrete	2,000 psi (13.8 MPa)	Hardened Concrete to Steel	1,900 psi (13.1 MPa)	<b>14 day (moist cure)</b>	Plastic Concrete to Hardened Concrete	2,200 psi (15.1 MPa)	Hardened Concrete to Hardened Concrete	2,000 psi (13.8 MPa)	Hardened Concrete to Steel	2,000 psi (13.8 MPa)
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<b>Shear Strength</b>	6,200 psi (43 MPa) (14 days)	(ASTM D-732) 73 °F (23 °C) 50 % R.H.														
<b>Heat Deflection Temperature</b>	[fiber stress loading 264 psi (1.8 MPa)] 122 °F (50 °C) (7 days)	(ASTM D-648)														

## APPLICATION INFORMATION

<b>Mixing Ratio</b>	Component 'A': Component 'B' = 1:1 by volume
<b>Coverage</b>	<b>Bonding Adhesive:</b> 1 gal. covers approximately 80 ft <sup>2</sup> on smooth surface. <b>Base Plate Grout:</b> 1 gal. mixed with 1.5 parts oven-dried aggregate by loose volume yields approximately 420 in <sup>3</sup> of grout. <b>Anchoring Grout:</b> 1 gal. yields 231 in <sup>3</sup> of grout.
<b>Product Temperature</b>	Condition material to 65°-75°F (18°-24°C) before using.
<b>Ambient Air Temperature</b>	Minimum ambient temperature 40°F (4°C).
<b>Substrate Temperature</b>	Minimum substrate temperature 40°F (4°C).
<b>Pot Life</b>	Approximately 30 minutes. (60 gram mass) Approximately 22 minutes. (350 gram mass)
<b>Contact Time</b>	<b>40 °F (4 °C)*:</b> 15–16 h <b>73 °F (23 °C)*:</b> 2–2.5 h <b>90 °F (32 °C)*:</b> 1.5–2 h <small>*Material cured and tested at the temperatures indicated.</small>

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY

Surface must be clean and sound. It may be dry or damp, but free of standing water. Remove dust, laitance, grease, curing compounds, impregnations, waxes and any other contaminants.

### SUBSTRATE PREPARATION

Concrete - Should be cleaned and prepared to achieve a laitance and contaminant free, open textured surface by blast cleaning or other equivalent mechanical means.  
Steel - Should be cleaned and prepared thoroughly by blast cleaning or other equivalent mechanical means.

### MIXING

Pre-mix each component. Proportion equal parts by volume of Component 'A' and Component 'B' into clean pail. Mix thoroughly for 3 minutes with Sika paddle on low-speed (400-600 rpm) drill until blend is a uniform color. Mix only that quantity that can be applied within its pot life.

### APPLICATION METHOD / TOOLS

**To bond fresh concrete to hardened concrete** - Apply by brush, roller, broom or spray. Place fresh concrete while Sikadur® 32, Hi-Mod, is still tacky. If coating becomes glossy and loses tackiness, remove any surface contaminants then recoat with additional Sikadur® 32 Hi-Mod, and proceed.

**To grout baseplates** - Add up to 1 1/2 parts of oven-dried aggregate to 1 part of mixed Sikadur® 32, Hi-Mod, by volume. Place grout under baseplate. Avoid contact with the underside of the plate. A 1/4 to 3/8 in. (6 to 10 mm) space should remain between the top of the grout and the bottom of the plate.

Maximum thickness of grout per lift is 1.5 in. (38 mm) If multiple lifts are needed, allow preceding layer to cool to

touch before applying additional layer. The remaining 1/4 to 3/8 in. (6 to 10 mm) space should be filled with neat Sikadur® 32 Hi-Mod. Pour a sufficient quantity of neat epoxy to allow the level to rise slightly higher than the underside of the bearing plate.

**To gravity feed cracks** - Pour neat material into vee-notched crack. Continue placement until completely filled.

Seal underside of slab prior to filling if cracks reflect through.

## LIMITATIONS

- For spray applications, consult Technical Service at 800-933-7452.
- Use only oven-dry aggregate.
- Material is a vapor barrier after cure.
- For applications on exterior, on-grade substrates, consult Technical Services at 800-933-7452.
- Do not apply over wet, glistening surface.
- Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.

## BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

## OTHER RESTRICTIONS

See Legal Disclaimer.

## ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must

read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

## LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

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**Sika Corporation**  
201 Polito Avenue  
Lyndhurst, NJ 07071  
Phone: +1-800-933-7452  
Fax: +1-201-933-6225  
[usa.sika.com](http://usa.sika.com)

**Sika Mexicana S.A. de C.V.**  
Carretera Libre Celaya Km. 8.5  
Fracc. Industrial Balvanera  
Corregidora, Queretaro  
C.P. 76920  
Phone: 52 442 2385800  
Fax: 52 442 2250537



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